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| 09/385,938 | 08/30/1999 | ANDREW G. BEVAN | 476-1843 | 9822 |

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EXAMINER

KUPSTAS, TOD A

ART UNIT

PAPER NUMBER

2153

DATE MAILED: 03/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/385,938

Applicant(s)

BEVAN ET AL.

Examiner

Tod Kupstas

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 December 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

1. Claims 1-13 are pending in the application.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1-5,7, and 13 are rejected under 35 U.S.C. 102(e) as being anticipated by Wolf (US 6,081,550).

As set forth in claim 1, Wolf discloses in a communications network (could either be a SDH network or a SONET) comprising a plurality of network elements (Fig. 1a-1d (NE1-NE8)), a method of providing management data describing synchronization trail information for said network elements, said method comprising the steps of: obtaining network element

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synchronization data; obtaining network element connectivity data; computing synchronization trail information (information is computed about the network trail, the test data provides information about the structure of the network by testing the existence of connections that are supposed to exist, and therefore establishes the existence of an intact path) for said network elements from said synchronization data and said connectivity data; see col. 3, line 12-col. 5, line 4 (Wolf uses the synchronization information to track and manage the connections between the Network Elements).

As set forth in claim 2, Wolf discloses a data representation of a physical resource operating in accordance with a protocol having a plurality of layers (a timing layer is present due to the existence of synchronization information, also Wolf operates in a SDH system which implies a timing layer).

As set forth in claim 3, Wolf discloses in a communications network (could either be a SDH network or a SONET) comprising a plurality of network elements (Fig. 1a-1d (NE1-NE8)), said network elements comprising a plurality of physical resources organized into a plurality of types of pre-configured structures (see figs. 1a-1d), a method of providing management data describing synchronization trail information of said network elements, comprising the steps of: representing said plurality of physical resources by a plurality of reference data; and representing synchronization trails within said network by a plurality of synchronization reference data; see col. 3, line 12-col. 5, line 4 (Wolf uses the synchronization information to track and manage the connections between the Network Elements).

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As set forth in claim 4, Wolf discloses a management system of managing synchronization for a network (could either be a SDH network or a SONET) comprising a plurality of physical resources (Fig. 1a-1d (NE1-NE8)), said system comprising: data storage means for storing; reference data representing connectivity between said resources; and synchronization reference data representing synchronization trails to each resource; see col. 3, line 12-col. 5, line 4 (Wolf uses the synchronization information to track and manage the connections between the Network Elements).

As set forth in claim 5, Wolf discloses a method of exploring synchronization trails within a network (could either be a SDH network or a SONET) comprising a plurality of network elements (Fig. 1a-1d (NE1-NE8)), the method comprising the steps of: obtaining network element synchronization data; obtaining network element connectivity data; deriving synchronization trail information from a network element and following the trail to the synchronization source of the element, using said synchronization data and said connectivity data; see col. 3, line 12-col. 5, line 4 (Wolf uses the synchronization information to track and manage the connections between the Network Elements) also col. 5, line 5-col.7, line 30.

As set forth in claim 7, Wolf discloses a method wherein computing the synchronization trail information comprises the steps of: selecting a network element as a start of a synchronization trail; and following the synchronization trail to the synchronization source of the network element using said synchronization data and said connectivity data (Wolf starts from a first element and follows through to the eight network element); see col. 3, line 39-44.

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As set forth in claim 13, Wolf discloses a system for providing management data describing synchronization trail information for network elements (Fig. 1a-1d (NE1-NE8)) in a communications network (could either be a SDH network or a SONET) comprising a plurality of said network elements (Fig. 1a-1d (NE1-NE8)), comprising: means for obtaining network element synchronization data; means for obtaining network element connectivity data; and means for computing synchronization trail information (information is computed about the network trail, the test data provides information about the structure of the network by testing the existence of connections that are supposed to exist, and therefore establishes the existence of an intact path) for said network elements from said synchronization data and connectivity data; see col. 3, line 12-col. 5, line 4 (Wolf uses the synchronization information to track and manage the connections between the Network Elements).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 6, 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wolf (US 6,081,550) in view of French et al (US 6,330,601).

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As set forth in claim 6, Wolf disclose a method of relating to synchronization trails within a network (could either be a SDH network or a SONET) comprising a plurality of network elements (Fig. 1a-1d (NE1-NE8)), said method comprising: obtaining network element synchronization data; obtaining network element connectivity data; deriving synchronization trail information for said network elements from said synchronization data and said connectivity data; for each synchronization trail; see col. 3, line 12-col. 5, line 4 (Wolf uses the synchronization information to track and manage the connections between the Network Elements). Wolf does not disclose representing the information from the test in graphical form. French discloses providing a GUI for representing the network information. It would have been obvious to a person of ordinary skill in the art at the time this invention was made to have provided the means for graphical representation of the network information to the system of Wolf as taught by French. The rationale is as follows: It would have been useful to display information representing the network in graphical form. As French teaches the desirability of displaying the network information in graphical form for management purposes, one of ordinary skill would have been motivated by French's teaching to have provided the system of Wolf with the means for displaying the network information in graphical form thereby having provided simple means for interacting with and managing the network.

Official notice is taken to labeling the respective elements of the network based on prior conditions, i.e. labeling elements OK, ISLAND, or LOOP. Labeling aspects of the network is old and notorious in the art. It would have been obvious to one of ordinary skill in the art to have

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labeled elements of the network for easy reference. The rationale is as follows: It would have been obvious to have utilized known labeling for network elements. As labeling aspects of the network is old in the art and used for referencing the network structure, one of ordinary skill would have been motivated by the need to clearly label aspects of the network for referencing to have labeled the aspects of the synchronized network in Wolf, thereby providing quick reference to structures in the network.

6. Claims 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wolf (US 6,081,550) in view of Meier (US 6,400,702).

Wolf does not disclose starting at leafNodes, or explicitly counting the hops. It is implied in Wolf that the elements in the network are tagged and kept track of when the trail is being traced, furthermore discarding the tags after a count is further implicit in the process. As set forth in claims 8 and 9, Meier discloses a method wherein computing the trail information comprises the steps of preferentially selecting leafNode network elements of the network as a start of a synchronization trail; see col. 6, lines 5-54. As set forth in claim 10, Meier discloses a method according wherein computing the trail information comprises the steps of: counting the number of hops from a network element at the start of the trail to a primary reference clock; see col. 6, lines 5-54. It would have been obvious to a person of ordinary skill in the art at the time this invention was made to have provided the synchronization network of Wolf, with preferences and counting mechanisms, as taught by Meier. The rationale is as follows: It would have been obvious to have

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utilized known network elements and structures to optimize the trail. As Meir teaches the desirability of using leafNodes and counting the hops to optimize the network trail, one of ordinary skill would have been motivated by Meir's teaching to have incorporated the counting system, with the synchronized network, thereby having provided optimal means for acquiring information about the synchronized network.

Response to Arguments

7. Applicant's arguments filed 12/12/02 have been fully considered but they are not persuasive.

Wolf generally relates to either a Synchronous Digital Hierarchy system or a Synchronous Optical Network system. Wolf in discussion of these systems discloses how a clock is passed through the system and utilized to test integrity of the clock path (i.e. the synchronization trail); see col. 3, lines 11-23 (these lines set forth the general concept of Wolf's disclosure). The further cited sections indicated how phase modulation is used to determine if an intact clock path exists, this indicates full disclosure of "synchronization trail information" (i.e. the clock path and information about that path) and further the limitation of "computing synchronization trail information for network elements from said synchronization data and said connectivity data" is clearly met by the testing of the integrity of the clock path when the reference clock is passed through the network elements NE1,..., NE8. This test demonstrates the connectivity of the

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system by testing the integrity of the connections and is further using the synchronization test in order to determine this through the distribution of the reference clock. Applicant changes “deriving” to “computing” however the Examiner contends that Wolf still meets this limitation. In Wolf the computing is done through the analysis of the data from the reference clock. The information computed is the integrity of the network. The Examiner maintains that the limitations set forth in the claims are met by Wolf, and that the rejection is a reasonable interpretation of Wolf with respect to the claim language.

With respect to claim 2 Applicant argues that Wolf does not “teach the existence of synchronisation information inherent in the network and so no timing layer for representing synchronisation trail information can be implied.” The Examiner disagrees noting that Wolf operates in a Synchronous Digital Hierarchy or Synchronous Optical Network that requires synchronization for the network to function.

The remainder of the claims are argued based on the change of language “deriving” to “computing” which is addressed above.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**

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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tod Kupstas whose telephone number is (703) 305-2655.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenton Burgess, can be reached at (703) 305-4792. The fax phone number for this art unit is (703) 308-7201. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the technology center receptionist whose telephone number is (703) 305-3900.

Tod Kupstas

March 4, 2003


KRISNA LIM
PRIMARY EXAMINER